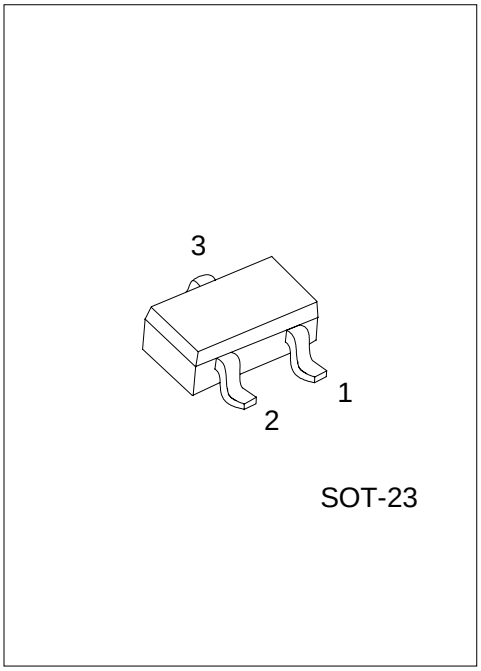
MMBTA94

PNP SILICON TRANSISTOR

HIGH VOLTAGE TRANSISTOR



*Pb-free plating product number: MMBTA94L

■ FEATURES

*Collector-Emitter voltage: V_{CEO}=-400V
*Collector Dissipation: $P_{C(MAX)}$=350mW
*Low collector-Emitter saturation voltage

■ APPLICATIONS

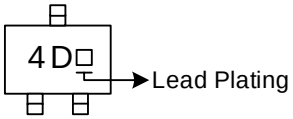
*Telephone switching
*High voltage switch

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
MMBTA94-AE3-R	MMBTA94L-AE3-R	SOT-23	E	B	C	Tape Reel

MMBTA94L-AE3-R (1)Packing Type (2)Package Type (3)Lead Plating	(1) R: Tape Reel (2) AE3: SOT-23 (3) L: Lead Free Plating, Blank: Pb/Sn

■ MARKING



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■ ABSOLUTE MAXIMUM RATING (Operating temperature range applies unless otherwise specified)

PARAMETER	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-400	V
Collector-Emitter Voltage	V_{CEO}	-400	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Dissipation (Ta=25°C)	P_C	350	mW
Collector Current	I_C	-300	mA
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-40~+150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

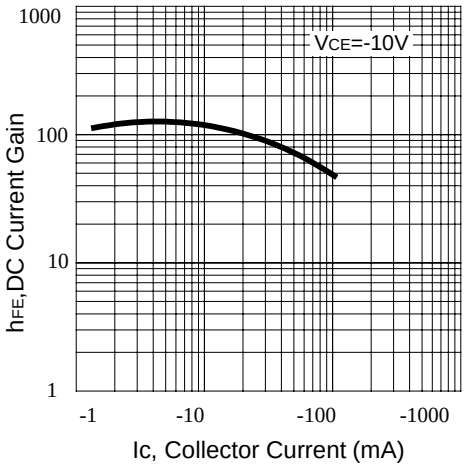
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CBO}	Ic=-100μA,IE=0	-400			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	Ic=-1mA,IB=0	-400			V
Collector-Emitter Breakdown Voltage	BV_{CES}	Ic=-100μA,V_{BE}=0	-400			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-100μA,Ic=0	-5			V
Collector Cut-off Current	I_{CBO}	V_{CB}=-300V,I_E=0			-100	nA
Collector Cut-off Current	I_{CES}	V_{CB}=-400V,V_{BE}=0			-1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=-4V,I_C=0			100	nA
DC Current Gain (note)	h_{FE}	V_{CE}=-10V,I_C=-1mA V_{CE}=-10V,I_C=-10mA V_{CE}=-10V,I_C=-50mA V_{CE}=-10V,I_C=-100mA	60 70 70 40		300	
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-10mA,I_B=-1mA I_C=-50mA,I_B=-5mA			-0.20 -0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-10mA,I_B=-1mA			-0.75	V
Output Capacitance	Cob	V_{CB}=-20V,I_E=0, f=1MHz			7	pF

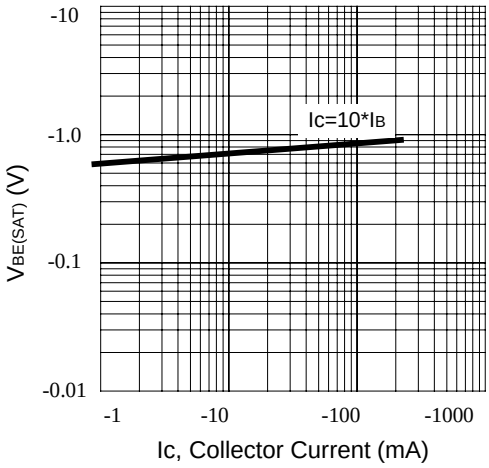
Note: Pulse test: PW<300μs, Duty Cycle<2%

■ TYPICAL CHARACTERISTICS

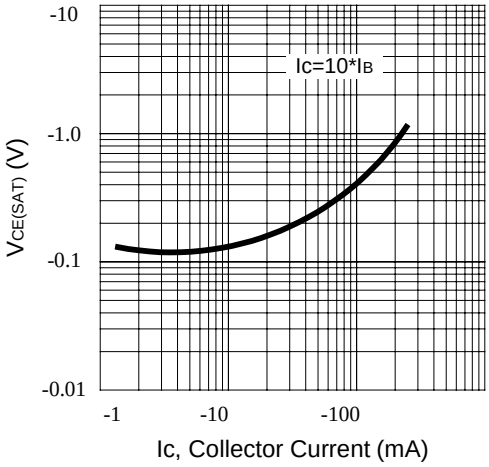
DC Current Gain



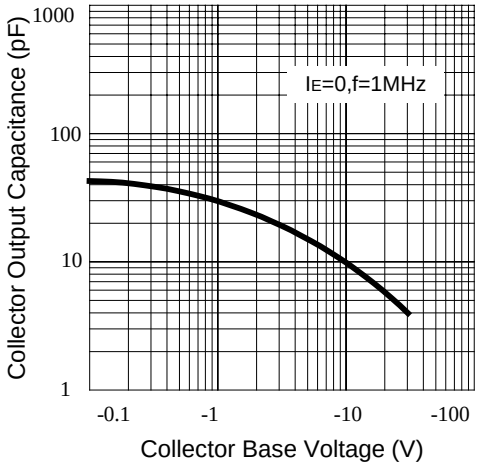
Base-Emitter Saturation Voltage



Collector-Emitter Saturation Voltage



Collector Output capacitance



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